# Naval Aviation Pilot Prediction System

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The line community has long recognized that predictors of fleet performance, including signs of unsafe behavior, may become evident during the early stages of pilots' careers. However, the Navy does not currently possess objective methods of identifying unsafe aviators. The selection methods currently used by the Navy and Marine Corps maintain training attrition at levels 25%. However, advanced training losses, which run 8-10%, are very expensive ($500,000 - $1,000,000 per failure). Furthermore, the costs of losses that occur after winging, at the Fleet Replacement Squadrons and beyond, are incalculable. Research in the 1950s and 1960s revealed that combinations of selection-test scores and training-performance scores could predict a pilot's fleet performance and likelihood of being in a mishap. This information was used until the early 1970s to set cut-off scores for entry into specific training pipelines. However, large-scale fleet surveys of pilot performance, database development, and inquiries into relations between training and fleet performance have not been conducted for the past 30 years. This project addresses these issues by:

(1) Centralizing the existing mishap and training data for naval aviators, and determining the feasibility of using fleet performance criteria to identify marginal performers,

(2) Developing predictive models from these databases that can be used as selection and classification criteria, or as review/mishap-board decision aids, and,

(3) Developing a network system for accessing the database and the predictive models.

The comprehensive database will include information on pilot performance from accession through winging, fleet-performance criteria for specific platforms, predictive models based on fleet performance and training-attrition experience, and an on-line decision aid. The decision aid will be available to progress review boards, mishap boards, and squadron commanding officers. It will have a graphical interface and an interactive module to help managers understand the relations between selection and training measures, as well as their most important downstream correlates: graduation from training, fleet performance, and mishap probability.